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SOFTWARE COMPANY

Reactions to a Continuous Feedback Intervention in a Software Company

A Thesis

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Performance Management

Performance management is a term used to describe organizational efforts to monitor and increase employee performance (Aguinis, Gottfredson, & Joo, 2012). Although there is great potential for such efforts to improve performance, there is strong agreement that performance management is the most difficult human capital system to implement successfully and have work effectively over time (Chubb et al., 2011, Aguinis et al., 2012). A study by Globoforce and the Society for Human Resources Management (SHRM) revealed that 45% of HR leaders do not think annual performance reviews are an accurate appraisal of employees' work (360 Degree Feedback, 2016).

The two variables in performance management most relevant to this project are feedback and the manager-employee relationship. A core assumption of practically all performance management programs is that if people receive feedback about their performance, they will be both motivated and empowered to improve. However, in the context of an annual performance appraisal there is evidence that this is not always the truth as many employees dislike receiving feedback (Cleveland, Murphy, & Lim, 2007) and the performance feedback they receive is often inconsistent and unreliable (Murphy et al., 2001). Indeed, providing feedback to employees can often lead to decreased, rather than increased, performance (Kluger & DeNisi, 1996). In an effort to maximize performance, managers and employees must both understand the key role that performance management plays in enabling work to be performed. The effectiveness of the relationship between a manager and an employee has a

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large impact on how they engage in the performance management process and the outcomes they experience (Daniels, 2000).

In summary, performance management is a process by which organizations attempt to improve employee performance. The performance management process itself can succeed or fail based on feedback and the manager-employee relationship. Organizations attempting to manage performance have many options, but by far the most popular means of performance management is the annual performance review, which is described next.

The Annual Performance Review

The most common forms of evaluating employee performance is by conducting an annual performance review. This consists of managers rating an employee's performance and providing feedback on the employee's strengths and opportunities for improvement. As recognized by Rynes et al. (2005), performance evaluations are believed to be capable of improving performance through developmental feedback and through administrative decisions that link evaluated performance to organizational rewards and punishments such as pay, promotion, or discharge. The review may be used for administrative purposes, developmental purposes, salary adjustments, promotion decisions, and to document poor performance in the case that somebody needs to be let go.

Completing an annual review allows high quality performance to be recognized and provides feedback to give a clear sense of how an employee is doing on the job. From an employer's point of view, the performance evaluation

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gives the employer a chance to review expectations for a specific position, recognize good performance as well as opportunities for improvement. From the employee's point of view, the performance review may be the only time that he or she has the manager's undivided attention to showcase accomplishments, discuss concerns, and explore development opportunities (Burnes-Bolten & Bradley, 2001). Although the annual performance review has several benefits, there are also several drawbacks that are discussed next.

It has been argued that attention should be directed away from the formal appraisal system (Pulakos & O'Leary, 2011). There are suggestions to eliminate the annual performance review processes entirely (Buckingham & Goodall, 2015). This may be a possibility if there are no ties between ratings and outcomes such as pay. However, when pay or other outcomes are tied to performance, there is a need for a formal system and administrative rating of record (Culbert, 2010). With the changing nature of work in recent years, (e.g., semiautonomous teams, remote work, freelancing, temporary work, etc.) it may be time to rethink the common fundamental assumptions about approaches to performance management. One of the main goals of performance appraisal has always been to achieve high performance by enabling managers to monitor and guide employees to higher levels of productivity and by providing motivation for employees to do their best. However, most employees do not find performance appraisals to be valuable or motivating but rather frustrating, too bureaucratic, and often not relevant to their jobs (Adler et al., 2016).

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When having multiple direct reports and maintaining a busy schedule as a manager, it can be easy to forget specifics and end up giving an overly generalized review to employees. This has several negative potential outcomes. For example, it may prevent poor performers from improving by not providing adequate feedback. It may also result in the top performers resenting not having concrete details about their performance that could help lead them to their next promotion. It is common that a manager ends up basing an annual review on what has happened most recently in the time period right before the annual review. This is not ideal for employees who may have been performing at a high level the majority of the year, but have not been as strong in the final few weeks. It also may encourage manipulative behaviors from others who may only work hard right before a review.

There has been a major disconnect between research and real world application of performance management for many years. As all organizations differ in multiple ways, there is not a one-size fits all model, but rather different practices are likely to be more appropriate and more effective for different organizations. Performance management needs to become more than simply completing forms and providing documentation to the Human Resources department (Cardy & Munjal, 2016). There is an increasing trend for leaders in Human Resources to search for alternatives to the annual performance review (Pulakos & O'Leary, 2011). Some scholars and practitioners have argued that a fundamental change is needed in how performance management is implemented

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and viewed, from an administrative exercise to the most important tool managers have to help them accomplish work through others (Pulakos & O'Leary, 2011).

In summary, while the annual performance evaluation has several benefits and remains the default performance management system for many organizations, there is growing sentiment among scholars and practitioners that there are better ways to manage employee performance. Many employees prefer frequent feedback, open communication and collaboration. A continuous performance management system might enable managers to coach and mentor and employees to constantly learn and grow on the job, in a way that is more effective than the annual performance review (Chawla et al., 2016). As such, the focus of this research paper is on one such option, continuous performance management.

Continuous Performance Management

In a continuous performance management system, there is an ongoing exchange of feedback between an employee and manager. Rather than meeting once per year to discuss performance, the goal with continuous performance management is to have ongoing discussions, check-in sessions, and frequent feedback. As such, continuous performance management seems to offer improvements in regard to two key variables discussed earlier – feedback and the employee-manager relationship.

First, in terms of feedback, continuous performance management seems to offer two advantages. Most apparent is that feedback will be more frequent. Depending on the employee's role, responsibilities, and relationship with

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manager, the frequency of feedback may vary (e.g., daily, weekly, monthly).

Studies consistently highlight that continuous feedback is more likely to ultimately change employee behaviors, especially when given in a timely manner. Sillup et al., (2010) found that organizations with monthly or quarterly performance appraisals outperformed competitors on every financial and productivity measure and got positive feedback from employees about the fairness of the system. This is true regardless of whether the feedback is provided formally or via informal daily feedback exchanges. One of the goals of continuous performance management is to enhance the recency and specificity of feedback provided. Continuous performance management strategies help to drive employee engagement and performance while additionally removing surprise, discomfort, and ineffectiveness of performance appraisals.

The second way that feedback is likely to be improved in continuous performance management has to do with the nature of the feedback. Continuous feedback focuses on developmental rather than simply administrative purposes such as that of an annual review. Buckingham and Goodall (2015), point out that developing research on employee coaching also highlights how informal performance dialogues between supervisors and subordinates can contribute to effective performance management.

Conducting one-on-one meetings on a regular basis may allow a manager and an employee to build a strong connection. The manager can give timely coaching, share feedback, and help to create a safe place for new ideas (Cleveland et al., 2007). Typically employees become more engaged and feel as

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if they are being heard. The frequent check-ins also allow problems to be fixed when small and help to ensure employees and the organization are operating at a high level.

When managers provide open and honest feedback frequently, employees are likely to develop trust and accept responsibility for improving performance and strengthening their abilities. By sharing rationale for certain individual objectives and tasks, managers help employees to understand how their work contributes to the overall goals of the department and the organization, which helps to make the employee realize their value. Providing feedback on these items on a more frequent basis may help to keep morale at a higher level. Den Hartog and colleagues (2004) emphasize the role of employee perceptions and resulting behaviors in successful performance management.

Gratton and Ghoshal (2002) argue that at all levels, the emphasis should be on the core of the appraisal and development process, that is “improving the quality of conversations”, rather than going through “dehydrated rituals”, with open leaders setting the example for a culture of creative learning organizations. As Cannel (2006) points out, there is still the need for a conversation to reflect on past performance and to look forward. Encouraging constant communication and feedback is an effort to keep everybody on track, increase individual performance, and ultimately increase organizational performance and efficiency.

Many scholars have commented on these and other improvements that might be gained through the use of continuous performance management. This includes quicker responses to business needs, increased productivity, and

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employee engagement. As described in Culbert (2010), a continuous performance management system has numerous potential benefits. First, managers can be more responsive to employee demands. Problems can be identified early on and communication can be more open and effective. Next, there can be a quicker response to changing business needs. Identifying current talent, future talent gaps, and strategizing for future hires can be done based upon the business needs at any given moment. This type of system may be less administratively intense, as much of the information is gathered from the employee and the manager must reflect on the information. Finally, a well-documented continuous talent management system can help in both decision making in general, and in being defensible for any future litigation that may occur after employee terminations.

Employee acceptance of an appraisal system is an essential part of the effectiveness. It is not only the outcome of the appraisal, but also the procedures that are determinants of satisfaction and perceived fairness of the overall appraisal system. Literature has found that a great majority of employees have a negative perception of the annual performance evaluation. According to performance review research, employee feedback includes, but is not limited to, 67% of employees not feeling heard during the review, 67% of employees not seeing changes occur from feedback given during the review, 61% of employees viewing a lack of career development opportunities, 56% of employees viewing a lack of monetary increases in the form of raises or bonuses, and 52% of

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employees perceiving a lack of organizational support in meeting individual objectives (Performance Reviews, 2015).

Organizations with an ongoing focus on performance management, in place of the annual evaluation, can have better employee, talent, and business results. As an example, organizations that have employees review their goals quarterly at minimum are 45% more likely to have above-average financial performance and 64% more likely to be effective at holding costs at or below level of competitors. Ongoing performance management should ultimately produce an increased focus on driving business results, an empowered and engaged workforce, and a foundational knowledge of talent. Further, a study by Gallup has also found that employees whose managers hold regular one-on-ones with them are 3 times as likely to be engaged (Garr, 2011).

The Trend Toward Continuous Performance Management

A number of organizations have recently begun to change aspects of their formal performance management systems and are introducing training and change management in an effort to drive more effective performance management behavior. This includes a variety of efforts to move toward continuous performance management, such as real-time feedback, more collaboration, etc. According to Meyer et al. (1965), the value of active, ongoing, constructive feedback, performance strategy, and coaching conversations between managers and employees has been long recognized.

There are many ways for an annual review period to actually cause more harm than good in employee morale. It has been suggested that the amount of

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time spent on reviews could be time spent more productively elsewhere. Many companies such as Deloitte, Adobe, Accenture, GE, and more have accepted the change of thinking in abandoning the annual review. A few of the main reasons for making the change away from the annual review include time costs, return on investment, and morale.

As an alternative to the default annual performance review, many organizations are moving toward continuous performance management. In an example of a company adopting a continuous performance management system as mentioned by Burkus (2016), it is now two years after the removal of the company's previous performance review system. A more frequent and less formal check-in process replaced the yearly performance review. Areas of improvement thus far include increased employee and manager morale, improved performance and a decreased number of employees quitting. Additionally, there has been a 50% increase in involuntary departures, as people who were not meeting performance expectations are dealt with in a more direct and quick manner. It was calculated that the company has gotten back most of the 80,000 hours previously spent by managers on annual reviews. In another notable example, when IBM changed their performance management system to a continuous process, employees said that they were quite satisfied with the more frequent feedback (Zillman, 2016).

In summary, multiple organizations have transitioned away from annual performance evaluations and have instead chosen to engage in more frequent performance management. The potential benefits of this frequent feedback

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include higher levels of employee engagement, timely coaching, more open communication, and a quicker response to changing business needs, to name a few. The research project described here is one example of an organization that has chosen the frequent performance feedback approach.

Organizational Context

This research was conducted at a software company headquartered in the upper Midwest United States. For privacy reasons, the organization is referred to here as SoftwareCo (SC). SC is made up of additional global offices and serves customers worldwide. The organization is dedicated to the success of the equipment finance industry by satisfying a distinct business need of providing diverse financing companies with cutting-edge solutions to help manage their day-to-day equipment finance and asset management operations as efficiently as possible.

Since SC was founded, the company has continually invested in the tools, technology and people needed to help clients meet the shifting demands of the rapidly changing industry. SC operates in more than 30 countries around the world and has customers including but not limited to 7 of the top 10 Captives, 11 of the top 15 Banks, and 7 of the top 10 Multinational Companies.

The technology products are designed to keep businesses operating at their peak by acting as one solution integrated across the business' IT ecosystem to control critical data across the enterprise. It allows the automation, syncing, and infusion of data into all key processes from origination to asset disposition

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and everything in between. This helps to drive efficiencies, promote growth, and ease compliance efforts.

After working in the Human Resources department at SC for the past two years, I have had the opportunity to gain a strong understanding of the culture of the organization. On a typical day, the culture of the organization is quite laid back. Employees are allowed to be in the office, work from home, or work whatever schedule best suits their individual life. There is no formal dress code but rather a “dress for your particular job” type of rule. For example, sales executives, human resources, and legal employees will be dressed in formal business attire when meeting with customers or other high level executives, but may be found in more casual clothing on a different day. Individuals in the software development and client support departments typically wear items as casual as jeans and tennis shoes. There is a company-wide, unspoken open-door policy to make employees feel comfortable in the workplace.

The purpose of performance management and goal setting processes is to provide a means for ensuring the success of the company through the development and personal competence of each individual employee. The overall goal is to provide a process that supports the vision and mission of SC, as well as provide supervisors and employees with a vehicle to communicate expectations.

An important component to employee success is a clear understanding of job duties, objectives and performance expectations. It was previously required that supervisors met with their direct reports for the annual review, and were also

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expected to have frequent one on one meetings throughout the year. With the new system, managers are given the suggestion to have check-in meetings with each of their employees on a weekly basis. If it is determined between the employee and supervisor that a different frequency of meetings was more reasonable, yet still effective, they may work with that schedule instead. Depending on the individual employee and manager, and their working relationship, the frequent check-in meetings were not always happening, resulting in a lack of performance feedback.

The previous method of performance evaluation for SC was a single, annual appraisal. The appraisal form itself, along with the process, resulted in many complaints from employees and managers. Employees criticized that managers did not put adequate effort into the review, that it was not an accurate way to document their performance, and that the objectives were too much at the group level versus examining individual accomplishments. With the previous appraisal method, employees were not given much input as to what their annual objectives or goals would be.

Dissatisfaction with the previous annual performance feedback system was provided to me via discussions with employees. The dissatisfaction was expressed more frequently around the review period, which is the first quarter of the year at SC. Complaints also became more prevalent when there were employees that managers were hoping to terminate, but when further examined by Human Resources and Legal, did not have enough supporting documentation.

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In my tenure at SC, I have received feedback regarding performance issues and the overall performance management process on a regular basis. It has been standard to receive approximately 5 comments or complaints per month from employees and managers. The complaints that I received around the performance management system and annual performance review were unsolicited. The open door type of environment of the organization often leads to many short and informal conversations with both managers and employees. Comments, concerns, and complaints have been received from numerous employees throughout the company, and are not limited to a small group of employees providing feedback multiple times. Around the annual performance review time, the feedback is greatly increased.

Managers complained that too much time was spent on reviews and that poor performance was not addressed well. From a human resource and a legal perspective, there was a major lack of solid documentation, which has possible implications if there was a need to fire an employee for performance reasons. For example, in fall of 2016, there were multiple situations in which employees were performing below expectations, not put on a performance improvement plan, and had no documented record of their poor performance. With such lack of documentation, firing for performance would be hard to defend in court.

Another common complaint from employees was that they did not have frequent enough conversations with their managers to discuss their performance, objectives, career goals, etc. The move to a continuous performance management system may help to address this complaint.

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It should be noted that continuous feedback is in addition to, rather than a replacement for, the annual performance feedback evaluation. The addition of continuous feedback conversations was approved by senior executives, explained to management, and then communicated to employees at one of the quarterly company-wide meetings. Human Resources provided all communications regarding change in process.

The newly implemented performance management system was implemented with an Excel-based tool consisting of four main sheets. The first sheet is titled "Objective Detail" which is where employees and managers place specifics regarding each goal or objective that is set. The category of the goal is defined (e.g., Projects, Sales, etc.), a description and metrics are established, and items are broken down into individual tasks. For each of the individual tasks, the employee will provide what the current percentage of completeness is. The second sheet is the "Status Report" which is to be completed by employees prior to a one on one meeting with his or her manager. The employee should fill out the "blocker" section with any obstacles or barriers that are in the way of making progress on or completing their objectives. During or following the one on one meeting, the manager is to fill out the "action" section indicating how they will help to remove the employee's obstacles. The third sheet is the "Completion Report" in which applicable areas should be filled in upon completion of any objective. This includes information from the Objective Detail sheet, manager and employee ratings, and manager and employee comments. The final sheet is the "Annual Summary" which is to be completed annually. Managers should use

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this section to evaluate each business objective that was established. For each objective, the manager describes performance expectations, how results were measured and the results that were achieved. There is a performance feedback summary, a section for manager and employee comments, an overall performance rating, and signatures of the employee, manager, and second level manager.

There are likely many contextual factors (e.g., organizational culture) that influence receptivity to continuous feedback, however, the focus in this research study is on one organization, SC, currently going through the transition.

Therefore, the focus is on the individual difference variables that might explain why some employees may like or dislike the change. Literature shows that performance management and appraisal schemes need to be well coordinated and monitored. In addition to evaluating employees on a regular basis, organizations should assess the effectiveness of the appraisal system periodically (Schraeder, 2007). The continuous performance management system has now been in place for 6 months. At this time, it was necessary to check in with SC employees, supervisors and business leaders to determine their reactions, acceptance and to determine effectiveness of the old system versus the new system.

Research Questions and Hypotheses

The research questions and hypotheses of this research were derived from a combination of research literature and organizational needs. Hypotheses were driven by what the research literature suggests to be important, my

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knowledge of the organization, and the informal feedback that I have received from employees and managers thus far.

Although no manager enjoys having negative performance conversations with employees, ignoring an employee's poor performance will likely make things worse (Wang et al., 2015). By approaching the performance situation in an open, fair and problem-solving way, the poor performers will likely either improve, or move on from their position. Having specific, timely conversations about behaviors and overall performance will help to keep the manager and the employee on the same page while also having strong performance documentation. The previous performance management system may have allowed some employees to have low levels of performance with relatively little consequence. Under the previous system, low performers typically would not be confronted via feedback or disciplinary action. In contrast, the new system encourages frequent feedback and performance-related communication. On one hand, for low performers, this may be undesirable, as they may, under the new system, be frequently confronted with negative feedback. On the other hand, it is conceivable that low performers have a desire to improve and may, therefore, appreciate the opportunity for additional feedback.

Under the previous system, poor performance may have been allowed to slip under the radar, as it was not confronted. Under the new system, employees will be given frequent feedback about their level of performance. Under the old system, poor or mediocre performers may have had to face their performance only once a year. Now it may be as frequent as every single week.

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People dislike receiving poor performance feedback. It was previously believed that people who are motivated by a strong desire to learn would respond well to getting critical feedback in a performance review and use that feedback to improve how they work. However, research suggests that even these individuals are significantly bothered by negative feedback (Cleveland, Murphy, & Lim, 2007).

Feedback has the potential to influence an individual's affective state toward negative feelings such as disappointment and tension. Negative feedback, such as that provided when performance is below acceptable standards, makes people uncomfortable, anxious, stressed, and frustrated, and may lower one's self-concept (Papousek, et al., 2011; Raftery & Bizer, 2009). In the previously used annual review system, people were rarely confronted with this type of threatening feedback, but in the new system it is likely they would frequently face negative feedback about themselves and their work. The unpleasantness of negative feedback invokes a desire to avoid future negative feedback. Avoidance, which would have been possible in the previously used annual performance review system, may occur less in the new continuous feedback system since regular meetings are required.

Ideally, employees struggling to meet performance standards would appreciate the constructive feedback, and use the opportunity to improve performance levels. Ilgen and Davis (2000) found that the negative emotions in feedback often lead to workers avoiding work tasks in favor of easier tasks in order to avoid repeated failures. Further, a high level of tension or anxiety is

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likely to have a negative effect on performance on tasks that require concentration and information processing (Cianci, Klein & Seijts, 2010).

In light of the frequent negative emotions implied by frequent feedback conversations, and the difficulty of improving one's performance under such circumstances, it is possible that employees with a history of low performance may differ in their perceptions of the new continuous performance management system.

Research Question 1: Will employees with a performance rating of "Below Expectations" have a less favorable perception of the newly implemented continuous performance management system than employees with previous performance ratings of "Meets Expectations" or "Exceeds Expectations"?

As previously noted, many SC employees have a considerable amount of freedom with respect to how and when their work is completed. In fact, SC employs several remote workers, who are rarely on site for face-to-face communication. Staples and colleagues (1999) suggest that for remote workers to be effective, they need managers who are good communicators. The remote manager must be able to manage meetings and employees' times effectively, be able to use information technology effectively to aid communication, and be available when needed for coaching or to provide other forms of help and support.

When managers and employees work at different physical locations, this presents a particular challenge for effective performance management.

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Communication may be more limited or more challenging in these situations (Cune & Fogelberg, 2011). On one hand, having more frequent conversations and more open communication may help to encourage a higher level of trust in the employee-manager relationship of remote employees, and lead to favorable views of the continuous performance management system. On the other hand, it may be possible that supervisors do not see a lot of what distance workers are doing day-to-day such that additional feedback is unnecessary and thus frustrating.

Research Question 2: Relative to employees who share a physical location with their supervisor, will remote employees have a more favorable reaction to the implementation of a continuous performance management system than those who work onsite?

It is well known that resistance to change can hinder the implementation of new organizational models of technologies and systems, and prevent successful transformations (Applebaum et al., 2015). Resistance to change is the tendency for something to resist change, even when a large amount of force is applied. Though at times change is inevitable, individual employees, or an organization, may refuse to fully support or adopt new behaviors or methods of performing tasks. This consists of actions taken by individuals and groups when they perceive that a change is occurring as a threat to them. Frequent reasons for resistance to change include threat of power, loss of control, job security, mistrust of initiators of change, strong habits, skepticism, and selective information processing, to name a few. Resistance to change is an individual

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difference variable that is likely to be driven in part by personality, affect, and other dispositional variables. Within this study, I also expected that resistance to change would be strongly linked to two particular groups: long-tenured employees and employees who have worked only for SC.

First, employees with longer tenure tend to become entrenched within the current organizational system, and are therefore more likely to prefer the status quo (Ng & Feldman, 2013). Kunze and colleagues (2013) found that job tenure was positively correlated with resistance to change. Chubb et al. (2011) suggests that employees with longer job tenure and which are satisfactory performers likely only need discussions when there are deviations from prior acceptable performance. That is, long-tenured employees may prefer a less-frequent style of management known as “management by exception” (Dekker & Woods, 1999). For such employees, it would be acceptable for communications with managers to be held at less frequent intervals. Thus, it is possible that long-time employees, who presumably know their job tasks very well, will not see much benefit from frequent performance-related communication. These employees may even see this as a distraction or hindrance, directing attention away from their primary work tasks.

Second, there is a group of employees who have only ever worked at SC, which also appear to have strong resistance to change. Although there is less research on employees who have only worked for one employer, the psychological processes that induce resistance to change are probably very similar to that in long-tenured employees. That is, they would have become

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comfortable with one particular set of performance management techniques, and dislike the discomfort associated with changing.

Such individuals have not experienced different organizational or management styles. From observing these employees in numerous work projects and situations, it can be noted that they are not fond of change in the workplace. For example, the recent upgrade to a new financial and time tracking system was not taken well by these individuals. It is likely that these employees are also entrenched in the previous style of performance management.

H1A: Resistance to change will negatively relate to reactions toward the continuous performance management system.

H1B: Because resistance to change should positively relate to job tenure, job tenure will negatively relate to reactions toward the continuous performance management system.

H1C: Relative to those who have experienced job change, employees who have only worked at SC should be relatively high in resistance to change. Therefore, employees who have only worked at SC will have negative reactions toward the continuous performance management.

Feedback received thus far on the continuous management system has varied. While certain employees and departments like the idea of having more frequent employee-manager interactions and continuous performance conversation, others have expressed that it feels like a useless additional task to complete. Based on feedback from employees, it appears that a key variable at play may be knowledge of results. Knowledge of results refers to awareness of

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how successfully a work task is performed. When the task itself provides this type of feedback, it is called intrinsic knowledge of results. When intrinsic knowledge of results is provided by one's work tasks, external knowledge of results – such as that provided by a supervisor's feedback – may be unnecessary, or at least viewed as unnecessary. Using the example of the software troubleshooting, an employee could execute a piece of software code and receive immediate feedback via error messages and troubleshooting procedures.

Intrinsic knowledge of results can be a highly effective performance feedback delivery system. For most jobs, knowledge of results helps to guide workers' performance and typically has a positive effect of stabilizing performance (Ishikura, 2011). Chiviacowsky and colleagues (2009) noted that having knowledge of results encourages learners to deeply process feedback. Because some employees at SC deal primarily with tasks that involve an intrinsic knowledge of results, it is important to see how these employees react to the new continuous performance management system.

In particular, there is one group of employees at SC who, due to intrinsic knowledge of results, seem to dislike the change to continuous performance feedback. Specifically, there have been multiple individuals in the Development department that have noted they would rather come to work and complete their own tasks while having less frequent check-ins with their manager. Development employees spend the majority of their time on tasks such as software coding and programming, diagnosing software problems, integrating software platforms, and

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responding to client requests. Most of this work is autonomous and likely does not require frequent feedback from a supervisor.

H2A: Intrinsic knowledge of results will negatively relate to the perceived favorability of the continuous method of performance management.

H2B: Development department employees will be high in intrinsic knowledge of results, and thus have more negative views of the continuous performance management system than employees in other departments.

Method

Participants

SC employs nearly one thousand employees globally. The sample for this research consisted of 115 United States-based SC employees. All individuals included in the study are full-time professional employees. To be eligible to participate in the study, employees must have been employed and received a score during the 2016 performance review period, and must remain an active employee with the organization at the time of the study. The participants consisted of an approximately equal distribution of males and females. At the time of study, there were 20 employees who worked either partially or completely remote from the headquarters office location. Individuals in the study ranged in age from 23 to 64 years old and varied in job tenure up to 33 years.

Measures

Demographics, education, tenure and employment history were gathered through SC personnel records. The previous method of performance

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management used by SC was an annual performance review. The format of the review included a list of an individual's goals or objectives for the year, a self-rating and comments, and a manager rating and comments. An overall performance rating of "Below Expectations", "Meets Expectations", and "Exceeds Expectations" for 2016 was provided and was collected through the Human Resources personnel records. See Table 1 for descriptive statistics describing this sample's demographics and previous performance ratings.

To assess employees' affective reaction to change, the Fedor et al. (2006) Commitment to Change Scale was used. This measure was designed to examine commitment to change, defined as a behavioral intention to work toward success of change and demonstrates a Cronbach's alpha of 0.94. Scale items are shown in Appendix A.

The Appropriateness Facet of the Organizational Change Recipients Belief Scale (Armenakis et al., 2007) was used to examine the cognitive reaction to change. This questionnaire can be used to gauge progress of organizational change efforts. The complete assessment includes 24 items that can be administered at any stage of the change process. The information obtained serves as a barometer of degree of buy-in among change recipients, an assessment of the deficiencies in specific beliefs that can adversely impact the success of an organizational change, and a basis for planning and executing actions to enhance buy-in among organizational change. The appropriateness facet of the measure determines the degree of perceived appropriateness of an

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organizational change and demonstrates a Cronbach's alpha of 0.83. Scale items are shown in Appendix B.

The Resistance to Change (RTC) measure was designed to assess an individual's tendency to resist or avoid making changes, to devalue change generally, and to find change aversive across diverse contexts and types of change. The sub-scales that were used for this research include Routine Seeking, to examine the behavioral component of resistance to change, and Emotional Reaction, to examine the affective component of resistance to change (Oreg, 2003). The Routine Seeking and Emotional Reaction subscales demonstrate Chronbach's alpha of 0.89 and 0.86, respectively. Scale items are shown in Appendix C.

The Work Design Questionnaire (WDQ) is used to assess job design and the nature of work. The scales examined in this research included the Task Identity and the Feedback from Job scales. The Task Identity scale reflects the degree to which a job involves a whole piece of work. The Feedback from the Job scale focuses on the degree to which a job provides direct and clear information about effectiveness of task performance. Together, these scales were used to assess the degree of intrinsic knowledge of results provided by work tasks. The WDQ exhibits excellent internal consistency reliability when subscales are used individually, combined, and as an entire set (Morgeson & Humphrey, 2006). The WDQ demonstrates a Chronbach's alpha of 0.86. Items are shown in Appendix D.

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Additional feedback was gathered by the participant completion of survey questions regarding performance feedback methods, feedback effectiveness, and communication about new system implementation. Lastly, there was an open-ended question that provided participants with the opportunity to address any additional comments, concerns, or suggestions for improvement (Appendix E).

Procedure

On a quarterly basis, there are mandatory, company-wide meetings. This provides the opportunity to learn what is happening in each of the sections of the business, view the status of our company objectives, and provide any updates that employees should be aware of. Employees were made aware of the implementation of a continuous performance management system during one of the company-wide meetings. The CEO made the announcement of the change in method of performance management, while the HR Leader followed up with a more detailed explanation. Employees and managers seemed to be enthusiastic about the change, as it is a known fact that performance management has not been a priority at SC for years. Employees were given further information and instruction when the process was rolled out to their specific department. It was also noted that Human Resources would be having check-ins to collect feedback that may help to improve the feedback system and the employee experience.

All surveys were administered electronically by SurveyMonkey, and distributed to employees via email. After the continuous feedback system had been in place for six months, an email was sent to the US-employee distribution

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list to check in and ask for participation in the survey. There was a 2-week period in which the survey could be completed. Reminders were sent at the end of the first week, and two days before the survey closed.

Response Analysis

Of the 115 employees eligible to participate, there were 105 individuals that completed the survey. All surveys that were submitted were fully completed with no incomplete responses. The 10 individuals that did not complete the survey included 2 chief-level employees, 3 senior-level employees, and 5 employees with tenure of less than one year.

Results

Preliminary Analyses

First, all survey items were subjected to basic psychometric analysis to examine the properties of each item. Reliability was determined by assessing coefficient alphas. Each of the scales used in the survey had a coefficient alpha of at least 0.81. Total scores were computed for each of the scales included in the survey. Correlations of all variables included in this study can be found in Table 2.

Included in survey items were questions to assess perception and effectiveness of the annual performance review system ($M = 3.34$, $SD = 1.27$) and the newly implemented continuous performance management system ($M = 5.72$, $SD = 1.08$). These findings suggest that, overall, there is a favorable reaction to the continuous performance management system and its effectiveness.

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Research Question 1: Will employees with a performance rating of Below Expectations have a less favorable perception of the continuous performance management system than employees meeting or exceeding expectations?

As shown in Table 1, there were only four current employees with performance ratings of Below Expectations. This small group size makes analyses potentially unreliable. The group of employees with previous performance ratings of Below Expectations had a significantly different perception of the continuous performance management system, $t(103) = 9.04$, $p < .01$. The individuals who had been performing below expectations had a significantly less favorable reaction ($M = 2.00$, $SD = 0.82$) to the new continuous performance management system than those meeting or exceeding expectations. ($M = 5.80$, $SD = 0.83$). To partially overcome the issue of small group size, this research question was evaluated more broadly by correlating ordinal-coded previous performance ratings (1 = Below Expectations, 2 = Meets Expectations, 3 = Exceeds Expectations) with perceptions of the new performance management system. Previous performance ratings were correlated with perceptions of the new system, $r = .411$, $p < .01$. The t-test for this Research Question should be interpreted with extreme caution due to the small group of 4 employees that was compared to the much larger group of remaining employees. The question posed in Research Question 1 was tentatively supported by the data; prior performance levels seemed to influence feelings about the new continuous performance management system.

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Research Question 2: Will remote employees have a more favorable reaction to the implementation of a continuous performance management system than those who work onsite?

Of the 105 participants in the study, 19 indicated that they worked remotely for the majority of their time while 86 employees worked primarily onsite. Remote employees had a less favorable ($M = 5.21$, $SD = 1.40$), but not significant, reaction to the continuous performance management system than did employees working onsite ($M = 5.76$, $SD = 1.01$). Results indicated that there was not a significant difference in reaction dependent upon work location, $t(103) = -1.61$, $p = 0.12$. The question posed in Research Question 2 was not supported. Although a difference was observed, it did not reach statistical significance.

Hypothesis 1A: Resistance to change will negatively relate to reactions toward the continuous performance management system.

Results indicated that dispositional resistance to change was negatively correlated to commitment to SC's change to the continuous performance management system ($r = -0.90$, $p < .01$), as hypothesized. Resistance to change also showed a significant and negative correlation to the Organizational Change Recipients Belief Scale ($r = -0.75$, $p < .01$), which examined the appropriateness of the change to continuous performance management. Hypothesis 1A was supported by the data as employees high in resistance to change had a

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significantly less favorable reaction to the newly implemented system ($r = -0.54$, $p < .01$).

Hypothesis 1B: Because resistance to change should positively relate to job tenure, job tenure will negatively relate to reactions toward the continuous performance management system.

Resistance to change was positively related to tenure ($r = 0.45$, $p < .01$), while negatively correlated to commitment to change ($r = -0.43$, $p < .01$) and change appropriateness ($r = -0.40$, $p < .01$). Employees with longer tenure had a higher resistance to change, lower commitment to change, and were less likely to have believed the change to a continuous performance management system was appropriate for the organization. Employees with longer tenure had a negative, but not significant, perception of the continuous performance management system ($r = -0.13$, $p = 0.17$).

To better understand the relations between job tenure, resistance to change, and reactions to the new system, a mediation analysis was conducted. Specifically, the relation between the job tenure predictor and the reactions outcome was expected to be moderated by resistance to change. The Hayes bootstrapping approach to moderation was taken (Preacher & Hayes, 2004). Bootstrapping is a procedure that may help to reduce concerns about a small sample size. As bootstrapping takes the observed data as the sole information about the population, it needs a reasonable original sample size. As explained by Chan and colleagues (1999), it is not possible to give a simple recommendation

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for the minimum sample size for the bootstrap method. However, this method appears to provide accurate results when using sample sizes of at least 50 (Hox, Moerbeek, & Schoot, 2017).

Results indicated that the link between tenure and reactions to the change was indeed mediated by resistance to change. The direct effect of tenure on reactions to change was non-significant ($b = .02$, CI: $-.06$ to $.04$), whereas the bootstrapped indirect effect was larger and significant (coefficient = $-.03$, CI: $-.05$ to $-.02$). Hypothesis 1B was supported by the data as resistance to change was positively related to job tenure and job tenure was negatively related to reactions toward the continuous performance management system.

Hypothesis 1C: Relative to those who have experienced job change, employees who have only worked at SC should be relatively high in resistance to change. Therefore, employees who have only worked at SC will have negative reactions toward the continuous performance management.

Of the 105 employees in the study, 65 have held jobs outside of SC while 40 have only ever worked at SC. There were no significant results in relation to whether employees held any previous employment outside of SC. Employees who have only worked at SC had a positive, but not significant, perception of the continuous performance management system ($M = 5.50$, $SD = 0.93$). Employees who have worked in places in addition to SC also had a positive, but not significant, perception of the new system ($M = 5.75$, $SD = 1.19$). Results indicated that there was not a significant change in perception of the new

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performance management system dependent upon if employee had previously held jobs outside of SC, $t(96) = 1.22$, $p = 0.23$. Hypothesis 1C was not supported by the data as there were no significant relationships between additional jobs outside of SC and reaction to the continuous performance management system.

Hypothesis 2A: Intrinsic knowledge of results will negatively relate to the perceived favorability of the continuous method of performance management.

Intrinsic knowledge of results was examined by the Task Identity and Feedback from Job subscales of the Work Design Questionnaire. Results indicated a significant negative correlation between the Work Design Questionnaire and perception of the continuous performance management system ($r = -0.46$, $p < .01$). Therefore, employees in jobs with high intrinsic knowledge of results show a less favorable reaction to the newly implemented continuous performance management system.

Hypothesis 2B: Development department employees will be high in intrinsic knowledge of results, and thus have more negative views of the continuous performance management system than employees in other departments.

Results indicated a significant difference in scores on the Knowledge of Results measure for employees in the Development department when compared to all other departments, $t(103) = 4.12$, $p < .01$, indicating a higher level of intrinsic knowledge of results for those roles. There was a negative, but not significant,

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difference in the favorability of the continuous performance management system for employees in the Development department.

To better understand the relations between knowledge of results, development department employees, and reactions to the new system, a mediation analysis was conducted. Specifically, the relation between the development department as predictor and the reactions outcome was expected to be moderated by knowledge of results. The Hayes bootstrapping approach to moderation was taken (Preacher & Hayes, 2004). Results indicated that the link between involvement in development department and reactions to the change was indeed mediated by knowledge of results. The direct effect of involvement in development department on reactions to change was non-significant ($b = .22$, CI: $-.20$ to $.65$), whereas the bootstrapped indirect effect was larger and significant (coefficient = $-.43$, CI: $-.67$ to $-.19$). Hypothesis 2B was supported by the data as employees in the development department had high knowledge of results and were negatively related to reactions toward the continuous performance management system.

Discussion

Practical Implications for SC

It is difficult to support the notion that there is one perfect performance review process that will work for all companies. As the workplace continues to evolve, the process of performance appraisals, such as the annual performance review, should be flexible and able to adapt to changes in the modern corporate structure and organization-specific business needs.

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Employees with a previous performance rating of “Below Expectations” showed a significantly less favorable reaction to the continuous performance management system, as tentatively supported by the findings for Research Question 1. Thus, it will be important to keep a watch on how the process is handled for those individuals. Specifically, as they may have a negative perception of the process, we must ensure that they are being treated equally, in terms of process, to employees who were already meeting or exceeding expectations.

Results related to Research Question 2 indicated that there was not a significant difference for remote employees versus onsite employee in their reactions to the continuous performance management system. Though non-significant, remote employees did have a less favorable view of the system. That being said, Human Resources should put in extra effort, potentially one-on-one calls with each of the remote employees, to ensure each understands the benefits and requirements of the new system.

As demonstrated in results for Hypothesis 1A and 1B, employees high in resistance to change had negative, though not significant, perception of the continuous performance management system. To address this, Human Resources may want to spend additional time going through the system with employees that are high in resistance to change. This group of employees has a large amount of legacy SC knowledge. Perhaps the change to the new system could be framed in a way that more frequent conversations can help to identify areas where transfer of knowledge and cross training by these employees is

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necessary and could be of great benefit to SC. Human Resources should also work closely with managers to help best tailor the system to this group of individuals.

Employees in roles that provide a high level of intrinsic knowledge of results had a significantly less favorable reaction to the continuous performance management system, as supported by the findings for Hypotheses 2A and 2B. Human Resources should work with managers in each department to determine how to best tailor the system to their department. Further, Human Resources should work with managers in each of the other departments as well to identify any necessary modifications.

Possible Implications for Other Organizations

To the extent that employees are performing well under a typical annual performance review system, they are likely to have a more positive perception about the implementation of a continuous performance management system, as supported in the findings for Research Question 1. For employees who are performing at lower levels, it may help to have additional informational sessions to explain the benefits of moving to a continuous system. Specifically, it may help to explain that by having more frequent manager check-ins, employees will be able to receive manager help earlier on before an issue becomes too large and out of control. Additionally, with increased transparency, both the employee and the manager will likely have a better gauge of where they stand with one another

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at all times, versus previously possibly being surprised with a rating come the annual review period.

The findings for Hypothesis 1A and 1B suggest that employees who are resistant to change will likely have a negative perception of the change to a continuous performance management system. Specifically, employees who are most entrenched in the annual system (i.e., those with longer tenure) may be most likely to resist the change. To encourage openness to the change, smooth the transition, or address concerns, the Human Resources department may consider framing the switch to a continuous performance management system as an improved focus on ongoing employee development and growth versus the previous focus on a single performance rating. As mentioned previously, informational sessions may also prove to be helpful in increasing acceptance to the new system. Further, separate manager informational sessions should be held to ensure all managers have a full understanding of the new system, the benefits of the change, and how to use the tool. Gaining manager buy-in and support may help to encourage employees to be more accepting of the change, as involvement from senior leadership appears to strongly support performance management efforts and acceptance (Guerra-Lopez & Hutchinson, 2013).

In the case of SC, employees in the Development department demonstrated high knowledge of results, as indicated in the results for Hypothesis 2A and 2B. It is likely that at other companies, certain groups of employees may be particularly susceptible to similar effects. Examples of jobs with similar knowledge of results to the software developers at SC include roles

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such as information technology specialists, computer systems managers, etc., in which feedback is provided from the job itself instead of only receiving external feedback from supervisors or coworkers (Wang et al., 2012).

Limitations and Future Directions

One of the limitations of the research was the number of participants included in the study. Though SC is a global company, only United States-based employees were included in the study. Additionally, only current employees who had a performance rating during the 2016 review period were considered eligible to be included in the study. Future research, specifically within SC, may include employees at each of the global locations to increase the strength of the results. Further, it may be informative to examine the results as they vary by region to gain a better understanding of how other regions of the world view a shift from an annual review to a continuous performance management system. Of those invited to participate in the study, there were 10 individuals that did not respond to the survey. It is unlikely that this number of non-responders lead to any type of response bias.

Related to the participant-base, there were only four employees in the “Below Expectations” grouping. One of the likely reasons for this is that employees with poor performance during the 2016 performance review period are no longer with the company. Those individuals either left the organization voluntarily or were removed involuntarily after struggling with performance issues. Had there been a larger number of employees with a “Below

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Expectations” performance rating included in the study, results may have been different, specifically for Research Question 1.

Another possible limitation is the timing of the study. At the time the survey data was collected, the continuous performance management system had been in place for six months. Conceivably, as the time goes on, employees and managers will become more familiar with the newly implemented system, will determine the most effective way to tailor it while following process, and will have stronger feelings, positive or negative, of the system. It may be beneficial to conduct a follow-up study after the continuous performance management system has been implemented for a longer period of time, perhaps after one year.

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Bibliography

- Adler, S., Campion, M., Colquitt, A., Grubb, A., Murphy, K., Ollander-Krane, R., & Pulakos, E. D. (2016). Getting Rid of Performance Ratings: Genius or Folly? A Debate. *Industrial and Organizational Psychology*, 9(02), 219-252.
- Aguinis, H., Gottfredson, R. K., & Joo, H. (2012). Using performance management to win the talent war. *Business Horizons*, 55, 609-616.
- Aguinis, H., Joo, H., & Gottfredson, R. K. (2011). Why we hate performance management – and why we should love it. *Business Horizons*, 54, 503-507.
- Aguinis, H., & O'Boyle, E., Jr. (2014). Star performers in twenty-first century organizations. *Personnel Psychology*, 67, 313-350.
- Aguinis, H., & Pierce, C. A. (2008). Enhancing the relevance of organizational behavior by embracing performance management research. *Journal of Organizational Behavior*, 29, 139-145.
- Appelbaum, S., Degbe, M., Macdonald, O., & Nguyen-Quang, T. (2015). Organizational outcomes of leadership style and resistance to change (Part Two). *Industrial and Commercial Training*, 47(3), 135-144.
- Armenakis, A., Bernerth, J., Pitts, J. and Walker, H. (2007) Organizational change recipients' beliefs scale: Development of an assessment instrument. *Journal of Applied Behavioral Science*, 43(4), pp. 481–505.
- Brentz, R. D., Milkovich, G. T., & Read, W. (1992). The current state of performance appraisal research and practice: Concerns, directions, and implications. *Journal of Management*, 18, 321–352.
- Buckingham, M., & Goodall, A. (2015). Reinventing performance management. *Harvard Business Review*, 93, 40-50.
- Burkus, D. (2016). How Adobe Scrapped Its Performance Review System And Why It Worked.
- Burnes-Bolten, L. & Bradley, C. (2001). Professional development: Your role in your annual performance evaluation. *The American Journal of Nursing*, 101(7), 71-74.
- Cannell, M. (2006). *Performance management: An overview*, CIPD website.

REACTIONS TO A CONTINUOUS FEEDBACK INTERVENTION IN A SOFTWARE COMPANY

- Cardy, R. L., & Munjal, D. (2016). Beyond Performance Ratings: The Long Road to Effective Performance Management. *Industrial and Organizational Psychology*, 9(02), 322-328.
- Chan, W., Ho, R. M., Leung, K., Chan, D. K., & Yung, Y. (1999). An alternative method for evaluating congruence coefficients with Procrustes rotation: A bootstrap procedure. *Psychological Methods*, 4(4), 378-402. doi:10.1037/1082-989x.4.4.378
- Chawla, N., Gabriel, A. S., Dahling, J. J., & Patel, K. (2016). Feedback Dynamics Are Critical to Improving Performance Management Systems. *Industrial and Organizational Psychology*, 9(02), 260-266.
- Chiviacowsky, S., Wulf, G., Laroque de Medeiros, F., Kaefer, A., & Tani, G. (2008). Learning benefits of self-controlled knowledge of results in 10-year-old children. *Research Quarterly for Exercise and Sport*, 79(3), 405-410.
- Chiviacowsky, S., Wulf, G., Wally, R., & Borges, T. (2009). Knowledge of results after good trials enhances learning in older adults. *Research Quarterly for Exercise and Sport*, 80(3), 663-668.
- Chubb, C., Reilly, P., & Brown, D. (2011). Performance Management Literature Review. *Institute for Employment Studies*.
- Cianci, A., Klein, H., & Seijts, G. (2010). The effect of negative feedback on tension and subsequent performance: The main and interactive effects of goal content and conscientiousness. *Journal of Applied Psychology*, 95(4), 618-630.
- Cleveland, J. N., Murphy, K. R., & Lim, A. (2007). Feedback phobia? Why employees do not want to give or receive it. In J. Langan-Fox, C.
- Cooper, & R. Klimoski (Eds), *Research companion to the dysfunctional workplace: Management challenges and symptoms* (pp. 168-186). Cheltenham, UK: Edward Elgar.
- Cocca, P. Alberti, M. (2010). A framework to assess performance management systems in SMEs. *International Journal of Productivity and Performance Management*, 59(2).
- Creative Metrics. (2008). *A comparison of effective and ineffective performance management initiatives* (Vol. III). Minneapolis, MN: Creative Metrics.

REACTIONS TO A CONTINUOUS FEEDBACK INTERVENTION IN A SOFTWARE COMPANY

- Culbert, S. A. (2010). *Get rid of the performance review: How companies can stop intimidating, start managing, and focus on what really matters*. New York: Business Plus.
- Culburtson, S. S., Henning, J. B., & Payne, S. C. (2013). Performance appraisal satisfaction: The role of feedback and goal orientation. *Journal of Personnel Psychology*, 12, 189-195.
- Cune, S. & Fogelberg, F. (2011). Can remote leadership skills be learnt? <http://www.virtualteamtraining.net/about-us/resources/>
- Cunningham, L. (2014). In big move, Accenture will get rid of annual performance reviews and ranking. *The Washington Post*.
- Daniels, A. C. (2000). *Bringing out the best in people: How to apply the astonishing power of positive reinforcement*. New York: McGraw-Hill.
- Dekker, S.W., Woods, D.D. (1999). To intervene or not to intervene: The dilemma of management by exception. *Cognition, Technology & Work*, 1(2), 86-96.
- Den Hartog, D. N., Boselie, P., & Paauwe, J. (2004). Performance management: A model and research agenda. *Applied Psychology*, 53, 556-569.
- DeNisi, A. S., & Kluger, A. N. (2000). Feedback effectiveness: Can 360-degree appraisals be improved? *Academy of Management Perspectives*, 14(1), 129-139.
- DeNisi, A. S., & Pritchard, R. D. (2006). Performance appraisal, performance management, and improving individual performance: A motivational framework. *Management and Organization Review*, 2(2), 253-277.
- Fedor, D. B., Caldwell, S., & Herold, D. M. (2006). The effects of organizational changes on employee commitment: A multi-level investigation. *Personnel Psychology*, 59, 1-29
- Froydis, V. A. (2010). Employee's perceptions of justice in performance appraisals. *Nurs Manage-UK*, 17(2), 30-34.
- Garr, S. S. (2011). *The Performance Management Framework Evolving Performance Management to Fit the Modern Workforce*. Oakland, CA: Bersin by Deloitte.
- Garr, S. (2013). *Reengineering for agility: How Adobe eliminated performance appraisals*. Oakland, CA: Bersin by Deloitte.

REACTIONS TO A CONTINUOUS FEEDBACK INTERVENTION IN A SOFTWARE COMPANY

- Goodall, M. B., Buckingham, M., & Ashkenas, R. (2015). Reinventing performance management. <https://hbr.org/2015/04/reinventing-performance-management>
- Gratton, L. & Ghoshal, S. (2002). Improving the Quality of Conversations. *Organisation Dynamics*.
- Gregory, J.B., Levy, P.E., & Jeffers, M. (2008). Development of a model of the feedback process within executive coaching. *Consulting Psychology Journal: Practice and Research*, 60(1), 42-56.
- Guerra-Lopez, I., & Hutchinson, A. (2013). Measurable and continuous performance improvement: The development of a performance measurement, management and improvement system. *Performance Improvement Quarterly*. 26(2), 159-173.
- Halim, A. H. (2011). Validation on behavioral competencies of a performance appraisal tool. *Journal of Psychological Research*, 6(2), 281-290.
- Hillgren, J. S., & Cheatham D. W. (2000). *Understanding performance measures: An approach to linking rewards to the achievement of organizational objectives*. Scottsdale, AZ: WorldatWork.
- Hox, J. J., Moerbeek, M., & Schoot, R. V. (2017). *Multilevel analysis: Techniques and application*. New York, NY: Routledge.
- Ilgen, D. & Davis, C. Bearing bad news: Reactions to negative performance feedback. *Applied Psychology: An International Review*, 49(3), 550-565.
- Ishikura, T. (2011). The use of knowledge of results based on the stability of performance during acquisition of timing skill: A validity study. *Perceptual and Motor Skills*, 112(1), 122-132.
- Johansson C. Astrom, S., Kauffeldt, A., Helldin, L. & Carlstrom, E. (2013). Culture as a predictor of resistance to change: A study of competing values in a psychiatric nursing context. *Health Policy*, 14, 156-162.
- Johnson, J. W. (2001). The relative importance of task and contextual performance dimensions to supervisor judgments of overall performance. *Journal of Applied Psychology*, 86(5), 984-996.
- Kellner, A., Townsend, K., Wilkinson, A., Greenfield, D., & Lawrence, S. (2016). The message and the messenger. *Personnel Review*, 45(6), 1240-1258.

REACTIONS TO A CONTINUOUS FEEDBACK INTERVENTION IN A SOFTWARE COMPANY

- Kirkland, K., & Manoogian, S. (2007). *Ongoing feedback, how to get it, how to use it*. Greensboro, NC: Center for Creative Leadership.
- Kluger, A. N., & Denisi, A. (1998). Feedback Interventions. *Current Directions in Psychological Science*, 7(3), 67-72.
- Kluger, A. N., & Denisi, A. (1996). The effects of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychological Bulletin*, 119(2), 254-284.
- Kunze, F., Boehm, S., & Bruch, H. (2013). Age, resistance to change and job performance. *Journal of Managerial Psychology*, (28)7-8, 741-760.
- Landy, F. J. (2010). Bias in performance ratings: Then and now. In J. L. Outtz (Ed.), *Adverse impact* (pp. 227-248). San Francisco: Jossey-Bass.
- Lam, M., O'donnell, M., & Robertson, D. (2015). Achieving employee commitment for continuous improvement initiatives. *International Journal of Operations & Production Management*, 35(2), 201-215.
- Latham, G. P., Almost, J., Mann, S., & Moore, C. (2005). New developments in performance management. *Organizational Dynamics*, 34(1), 77-87.
- Ledford, G. E., Benson, G., & Lawler, E. E. (2016). Aligning Research and the Current Practice of Performance Management. *Industrial and Organizational Psychology*, 9(02), 253-260.
- Longnecker C.O. (2011). Key managerial competencies for value-added appraisals. *J Comp Benefits*. 27(5), 11-18.
- Mauss, D., Li, J., & Angerer, P. (2016). Psychometric properties of the work well index: A short questionnaire for work-related stress. *Stress and Health*, 33(1), 80-85.
- Meyer, H., Emanuel, K., & French, J. (1965). Split roles in performance appraisal. *Harvard Business Review*, 43(1), 123-129.
- Morgeson, F., & Humphrey, S. (2006). The Work Design Questionnaire (WDQ): Developing and validating a comprehensive measure for assessing job design and the nature of work. *Journal of Applied Psychology*, 91(6), 1321-1339.

REACTIONS TO A CONTINUOUS FEEDBACK INTERVENTION IN A SOFTWARE COMPANY

- Motro, D. & Ellis, A. (2017). Boys, don't cry: Gender and reactions to negative performance feedback. *Journal of Applied Psychology*, 102(2), 227-235.
- Murphy, K. R., Cleveland, J. N., & Mohler, C. (2001). Reliability, validity, and meaningfulness of multisource ratings. In D. Bracken, C. Timmreck, & A. Church (Eds.), *Handbook of multisource feedback* (pp. 130-148). San Francisco, CA: Jossey-Bass.
- Murphy, K. R. (2008). Explaining the weak relationship between job performance and ratings of job performance. *Industrial and Organizational Psychology: Perspectives on Science and Practice*, 1, 148-160.
- Murphy, K. R. & Cleveland, J. N. (1995). Understanding performance appraisal: Social, organizational, and goal-based perspectives. Thousand Oaks, CA: Sage.
- Myers, M. B., Griffeth, D. A., Daugherty, P. J., Lusch, R. F. (2004). Maximizing the human capital equation in logistics: Education, experience, and skills. *Journal of Business Logistics*, 25, 211-232.
- Ng, T. W. H., Eby, L. T., Sorensen, K. L., Feldman, D. C. (2005). Predictors of objective and subjective career success: A meta-analysis. *Personnel Psychology*, 58, 367-408.
- Ng, T. W. H. & Feldman, D. C. (2013). A meta-analysis of the relationships of age and tenure with innovation-related behavior. *Journal of Occupational and Organizational Psychology*, 86, 585-616.
- Olmstead, J., Falcone, D., Lopez, J., Sharpe, L., & Michna, J. (2012). Perioperative Employee Annual Evaluations: A 30-Second Process. *AORN Journal*, 96(6), 627-633.
- Ones, D. S., Viswesvaran, C., & Schmidt, F. L. (2008). No new terrain: reliability and construct validity of job performance ratings. *Industrial and Organizational Psychology: Perspectives on Science and Practice*, 1, 174-179.
- Oreg, S. (2003). Resistance to change: Developing an individual differences measure. *Journal of Applied Psychology*, 88(4), 680-693.
- Papousek, I., Paechter, M., & Lackner, H. (2011). Delayed psychophysiological recovery after self-concept-inconsistent negative performance feedback. *International Journal of Psychophysiology*, 85, 275-282.

REACTIONS TO A CONTINUOUS FEEDBACK INTERVENTION IN A SOFTWARE COMPANY

- Pearce, J. L., & Porter, L. W. (1986). Employee responses to formal performance appraisal feedback. *Journal of Applied Psychology*, 71, 211-218.
- Performance Reviews: Who Do They Really Help?] (2015, August 04). <https://www.bamboohr.com/blog/performance-reviews-people/>
- Posthuma, R. A., & Campion, M. A. (2008). Twenty best practices for just employee performance reviews. *Compensation & Benefits Review*, 40(1), 47-55.
- Preacher, K.J. & Hayes, A.F. Behavior Research Methods, Instruments, & Computers (2004) 36: 717. <https://doi.org/10.3758/BF03206553>
- Pulakos, E. D. (2009). *Performance management: A new approach for driving business results*.
- Pulakos, E. D., Hanson, R. M., Arad, S., & Moya, N. (2015). Performance management can be fixed: An on-the-job experiential learning approach for complex behavior change. *Industrial and Organizational Psychology*, 8, 51-76.
- Pulakos, E. D., & O'Leary, R. S. (2011). Why Is Performance Management Broken? *Industrial and Organizational Psychology*, 4(02), 146-164.
- Rafferty, J., & Bizer, G. (2009). Negative feedback and performance: The moderating effect of emotion regulation. *Personality and Individual Differences*, 47, 481-486.
- Rees, D. W., Porter, C. (2003). Appraisal pitfalls and the training implications. *Industrial and Commercial Training*, 36(1), 29-34.
- Rose, M. (2005). Do rising levels of qualification alter work ethic, work orientation and organizational commitment for the worse? Evidence from the UK, 1985-2001. *Journal of Education and Work*, 18, 131-164.
- Rynes, S. L., Gerhart, B., & Parks, L. (2005). Personnel Psychology: Performance Evaluation and Pay for Performance. *Annual Review of Psychology*, 56(1), 571-600.
- Schraeder, M., Becton, J., Portis, R. (2007). A critical examination of performance appraisals: An organisation's friend or foe? *The Journal for Quality and Participation*, Spring, 20-25.
- Sillup, G. P., Klimberg, R. (2010). Assessing the ethics of implementing

REACTIONS TO A CONTINUOUS FEEDBACK INTERVENTION IN A SOFTWARE COMPANY

performance appraisal systems. *Journal of Management Development*, 29(1).

Smith, K. (2010). Reinvigorating performance evaluation: First steps in a local health department. *Publ Health Nurs.* 27(5), 425-432.

Staples, D. S., Hulland, J. S., & Higgins, C. A. (1999). A Self-Efficacy Theory Explanation for the Management of Remote Workers in Virtual Organizations. *Organization Science*, 10(6), 758-776.
doi:10.1287/orsc.10.6.758

Szalma, J. L., Hancock, P. A., Dember, W. N., & Warm, J. S. (2006). Training for vigilance: The effect of knowledge of results format and dispositional optimism and pessimism on performance and stress. *British Journal of Psychology*, 97, 115-135.

Tesluk, P. E., Jacobs, R. R. (1998). Toward an integrated model of work experience. *Personnel Psychology*, 51, 321-355.

Tziner, A., & Kopelman, R. E. (2002). Is there a preferred performance rating format? A non-psychometric perspective. *Applied Psychology: An International Review*, 51(3), 479-503.

Wang, M., Burlacu, G., Truxillo, D., James, K., & Yao, X. (2015). Age differences in feedback reactions: The roles of employee feedback orientation on social awareness and utility. *Journal of Applied Psychology*, 100, 1296-1308.

Wang, M., Olson, D.A., Shultz, K.S. (2012). *Mid and Late Career Issues: An Integrative Perspective*. Retrieved from <http://books.google.com>.

Zillman, C. (2016). IBM is totally revamping its annual performance review. <http://fortune.com/2016/02/01/ibm-employee-performance-reviews/>

360 Degree Feedback: One Solution to Keeping Employees Engaged - SHRM. (2016, December 06). <https://talentguard.com/360-degree-feedback-one-solution-to-keeping-employees-engaged/>

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Tables

Table 1

Demographics

	Frequency	Min.	Max	Mean	Std. Deviation
Age		24	64	42.43	9.48
Tenure (years)		1	31	10.74	9.14
Gender					
Male	57				
Female	48				
Level of Education					
High School	11				
College	81				
Graduate School	13				
2016 Performance Rating					
Below Expectations	4				
Meets Expectations	63				
Exceeds Expectations	38				